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The temporary as the future

Ready-to-use therapeutic food and nutraceuticals in South Africa

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In 2015, the outpatients of a small clinic in an informal settlement on Cape Town's periphery were receiving a supplement along with their HIV treatment, which took the form of a small, blue bottle. The bottle contained a paste made of peanuts, milk powder, sucrose, vegetable oil, emulsifier and glucose powder, fortified with vitamins and minerals. The logo on the bottle took the form of a stylized sunrise over mountains, with yellow suns circling the packaging to signify *energy and vitality* – the substances the bottle purported to contain. The paste, aptly called *Imunut*, was described on the packaging as 'a ready-to-use food supplement, RUTF F-100 formula'. The product is made by a South African company (byline: 'Manufacturers of food for wellness') which, according to its website, aims to cater to both the nutraceutical market for health food supplements in South Africa and to 'nutrition crisis zones around the world'.

The company's recently established Cape Town factory has been built 'according to highest design standards', with a 'current capacity based on existing market demands', and room for expansion should 'market demand' increase. The peanut paste is part of the company's 'diversification' beyond 'phytonutraceuticals' that includes ready-to-use therapeutic foods, which are cited as 'a vital tool against acute childhood nutrition'. In addition, the company cites 'cutting edge research and development into the benefits of nutrition for persons suffering with HIV/AIDS' and has tenders with the South African government to supply these products across the country. The company describes itself as a South African entrepreneurial success story, with 'phenomenal growth' in recent years.

This article is about ready-to-use therapeutic foods and nutraceuticals in South Africa, and the specific temporalities and logics at stake in their deployment by state and corporate actors. We use the term 'ready-to-use therapeutic food', or 'RUTF', to refer to the packaged, durable and easily dispensable food products that initially emerged as a humanitarian technology in zones of crisis – such as famine, war or natural disaster – where immediate intervention is necessary to preserve life. Borrowing from Alice Street's definition (2014), we use the term 'nutraceuticals' to describe foods that have been 'transformed' and 'enhanced' through technological or design processes, such as the fortification of foods with vitamins and minerals, the biofortification of food through plant breeding for nutrient-rich crops and the manufacture of dietary supplements.

We start with a brief history of therapeutic foods in global and South African contexts. Drawing on fieldwork in the Western Cape and KwaZulu-Natal provinces in South Africa, we then outline the ways in which the logic of RUTF provision in South Africa illuminates a particular political logic and distribution of ethical concern that is different from that described by others who have documented RUTF use, predominantly in crisis zones.

We argue that the institutional logics that shape RUTF use in South Africa give rise to a different temporal horizon: objects that once formed part of a humanitarian imaginary of failed states, now form part of a welfare logic in contemporary South Africa which is not configured by acute crisis but is premised on a complex relation between the present and a continuously receding future. Focusing on the figures of the pregnant woman and the HIV-positive subject, we show that in the South African context, the provision of RUTF and nutraceuticals – in assemblages of state policy, philanthropic interventions and market innovation – is configured by shifting ideas about 'life' and the future as conceptualized within new global health frameworks.

Therapeutic foods: Global and local histories

The global history of the rise of fortified foods, RUTFs and nutraceuticals reveal a complex and shifting topology of life and humanity as the concern of states, global bodies, philanthropies and pharmaceutical companies. As documented by Peter Redfield (2012), Tom Scott-Smith (2013, 2015a,b) and Alice Street (2014), there has been a general shift in humanitarian aid from community-based food provision programmes to the individualized rations that are embodied in contemporary RUTFs.

The use of fortified, pre-made foods dates back to the 1960s, although the K-rations of American soldiers in World War II were part of the initial production of domestic consumer goods in the retooling of the war apparatus. After World War II, fortified foods become an object of convenience, with the 'TV dinner' being the most obvious example in Northern settings.¹ As Tom Scott-Smith (2015a) has outlined, their significance as a key technology of humanitarian intervention was influenced by four factors: a post-World War II trend towards 'efficient' diets, given a global food shortage; the high modernism of the time, which favoured technological solutions; an industrial development approach to nutrition; and corporations seeking new outlets for their products. On the African continent, the early 20th-century view of the colonial science of nutrition as 'the key to ill health in Africa' (Vaughan 1988: 132) prefaced post-war development programmes such as UNICEF's (United

Nations International Children's Emergency Fund) GOBI-FFF¹ campaign, which included food supplementation, especially during the perinatal period (WHO 2002).

In South Africa, the development thesis that characterized international post-war modernization theories was harnessed to justify apartheid ideology, and the apartheid state's approach to nutrition rested on state paternalism and the trope of 'African cultural ignorance' (Wylie 2001: 242). The apartheid government closed the Department of Nutrition and related services in homelands designated for black Africans in the 1950s, yet presented an alternative image to the international community during the 1960s by contributing to international research on protein-energy malnutrition and instituting milk distribution programmes in line with UNICEF recommendations. Even these schemes, along with the recording of nutrition statistics, were abandoned in 1968 as costly and inefficient exercises, given that – according to the authorities – malnutrition resulted from ignorance rather than famine (Wylie 2001).

The formation of a post-apartheid concern with nutrition and fortification has five key moments: the formation of the South African Vitamin A Consultative Group in the 1990s; the implementation of the first National Food Consumption Survey in 1999; the piloting of the World Health Organization's (WHO) 10-step protocol for the management of severe malnutrition (in two hospitals in the Eastern Cape province) in 2002 (Ashworth et al. 2004); the findings of the National Fortification Task Group being adapted, adopted and legislated in 2003; and lastly, the publication of the first South African National Health and Nutrition Examination Survey (SANHANES1) in 2013 (Shisana et al. 2013). During this period, socially progressive activism focused on the fortification of basic food staples, such as maize meal and flour.

In the midst of these efforts, RUTFs were beginning to make their way into standard clinical practice in state hospitals, clinics and social welfare programmes. During Cousins's fieldwork in KwaZulu-Natal (KZN) from 2008-2010, he encountered various brands of curative and nutraceutical supplementation available across the therapeutic landscape of the province, which had expanded in response to the HIV pandemic. Interviews with small-town pharmacists in northern KZN revealed deep transformations in the circulation and consumption of pharmaceuticals within the past decade. HIV-positive state employees and middle class citizens with the means had begun to source their prescriptions from mail-order warehouse/distribution centres that secured tenders directly from the state, rather than obtaining their drugs from pharmacies, where they could be publicly seen collecting their antiretroviral therapy (ART).

Small-town pharmacies were struggling to survive and had turned to a range of supplements to bolster their incomes, stocking a range of 'nutritive substances' or industrial hybrids of traditional medicines, vitamins, purgatives and RUTF packs. Apart from the RUTF in the marketplace, these food substances were also a part of the US government-funded rural ART programme administered by the Africa Centre for Health and Population Studies. It was through these assemblages of research, global health aid and state programmes that RUTF began to be prescribed by doctors and became increasingly available in pharmacies across rural and urban South Africa.

Of particular importance in this history is the former president Thabo Mbeki's 'denialism' that HIV caused AIDS and the minister of health's advocacy of 'nutrition' as a better, less toxic, more 'African' alternative to pharmaceuticals. As AIDS politics intensified (from 2002) around the state's refusal to make ART available to all, and as the health minister's advocacy of nutrition amplified, activists directed their efforts against a growing market of popular or alternative therapies, which proliferated in pharmacies, street stalls and informal markets. Framed as 'quack cures', they became the object of a call for an evidence-based governance of medicine that would make the promotion or consumption of such products illegal (Cousins 2015).

Post-apartheid HIV activists took up the language of the 'scientific governance of medicine' in the early 2000s to counter the proliferation of nutritive substances claiming to cure HIV in the absence of a comprehensive state-driven antiretroviral programme (Geffen 2010). However, as Cousins has shown, the popularity of such substances since the mid-19th century reflects a long history of social and political struggle in southern Africa, expressed in terms of *amandla* (strength or capacity) (Cousins 2014). The history of making food as a pharmaceutical begins to look different once one encounters the messy transformations of hunger, pharmaceuticals and immunity as grounded historiographical concerns, particularly in the context of the temporalities at stake in those forms of governance.

In sum, concerns about nutrition after apartheid have been indelibly shaped by intense controversies around HIV and nutrition in the early 2000s. The HIV epidemic in South Africa has been characterized by a shift from polemic arguments about the primacy of nutrition for immunity during the AIDS denialism years to shifts in the activist discourse around HIV and nutrition as ART has become available, revealing a hidden reality of hunger and the fact that ART cannot be taken on an empty stomach (Cousins 2015, 2016). This history shows that it is impossible to consider nutrition in the post-apartheid South African context separate from biomedical knowledge of the gut and immune system functioning and their relation to HIV infection. South Africa clearly has a particular place in the history of the struggle to delineate nutritive substance from toxic traditional medicine or biomedical pharmaceuticals (Cousins 2015). At the same time, the pregnant woman remains a central figure in the story of HIV in the South African context. That RUTFs and nutraceuticals have entered ordinary usage in HIV management and antenatal care in South Africa is yet another chapter in the entangled nexus between HIV, nutrition and pregnancy in this context.

Nutrition, HIV and pregnancy: Contemporary RUTF use in South Africa

Since 2014, Pentecost's research has been concerned with the logic and implications of South Africa's national nutrition policy, which, as of 2013, has focused on 'the first thousand days of life', while also retaining a focus on nutrition and HIV infection. The programme is based on the benefits of nutritional supplementation in the 'first thousand days' of life (pregnancy and the first 2 years of life) as a window of opportunity for decreasing both childhood malnutrition and promoting long-term benefits (Pentecost 2018). The Nutrition Therapeutic Programme in place in the clinics where Pentecost worked replaced the older 'Protein Energy Malnutrition Scheme' in 2013. 'Protein Energy Malnutrition' supplanted an older vocabulary of *kwashiorkor* and *marasmus*, which denote forms of acute child malnutrition. The Nutrition Therapeutic Programme focuses on underweight HIV-positive patients, premised on a link between adequate nutrition and delayed progression of infection; and underweight pregnant women and growth-faltering infants, based on the logic of early life interventions.

In practice, the nutritional status of HIV-positive patients and pregnant women are respectively assessed and categorized according to body mass index (BMI) and mid-upper arm circumference (MUAC) – both forms of anthropometric measurement that give insight into individual

nutritional status. Those falling into the ‘underweight’ category according to these measurements are enrolled in the provincial Nutrition Therapeutic Programme. As part of this programme, patients receive supplements intended to be ‘additional’ to ‘normal family meals’. In the clinics, the patients – or ‘clients’ as the staff referred to them – would receive fortified porridge, milkshakes and peanut paste. The porridge contained a micronutrient mixture for enhanced immune system functioning. The packaging stated that ‘apart from the direct benefits [of the product] on the immune system, long-term benefits regarding prevention of degenerative diseases of lifestyle are a distinct possibility’.

In late 2014, Michelle met Inam in a clinic waiting room that was adorned with bright yellow posters advertising Cape Town as the ‘World Design Capital’ of that year. The posters cited Steve Jobs, founder of Apple Computers: ‘*Design is not just what it looks like and feels like. Design is how it works*’. Inam was placed on the Nutrition Therapeutic Programme after being classified as underweight. Inam said that she had always been ‘skinny’, and put it down to her busy lifestyle as a journalist. She enjoyed the porridge and the milk, but disliked the peanut butter. ‘It’s too sweet’, she said, ‘I can’t handle sweet things’. Inam was employed and relatively food secure compared to Michelle’s other informants, who, having been categorized by the nursing staff as overweight according to their BMIs, were not eligible for supplements but nevertheless experienced frequent hunger. Patients who were enrolled in the therapeutic food programme but attended irregularly or failed to attend were labelled ‘defaulters’ – the same term as applied to those who did not comply with their drug regimens – and could not be re-entered into the programme. Patient responsibility in this new frame was thus extended beyond adherence to ART (Robins 2006), to include adherence to pharmaceuticalized food.

RUTFs and the ordinary

Returning to analyses of RUTFs in more familiar narratives of crisis, we find that these substances in the South African context point to a different specificity. Of RUTFs used elsewhere, probably the most well-known is Plumpy’nut: a sticky, peanut butter-like paste produced by the French corporation Nutriset, which has been described as an indispensable, even fetishized, part of the humanitarian aid landscape for the treatment of acute child malnutrition (Redfield 2012; Scott-Smith 2013). The work of social scientists on these RUTFs characterizes their use as follows: (1) they are deployed in episodes of ‘crisis’, such as famine or medical emergency; (2) their provision is often facilitated by non-governmental or humanitarian organizations in the context of a failed or absent state, justified by a moral imperative to save lives, and (3) the central figure in this humanitarian imagination is most often the malnourished child (see also Bornstein 2010; Fassin 2012).

Further, a central theme in work on products like Plumpy’nut is their *design*. As Redfield argues, inventions like Plumpy’nut are designed to operate independently of local infrastructure and to respond to bottom-of-the-pyramid market opportunities as innovative alternative technologies, whilst remaining ‘distinctly humanitarian goods’ (2012, 2015). In these emergency settings, their provision is politicized as an ‘ethics in action’ that uncritically appeals to the universal. Nutriset’s slogan is exemplary of this logic: ‘nutritional autonomy for all’ (Redfield 2012), with the figure of the individual as sovereign consumer at its centre. Yet, despite the humanitarian logic underlying their use, RUTFs are not meant to be permanent nutritional substitutes. They are highly mobile, reconfigurable, emergency palliatives, deployed on the basis of immediate need – ‘immediate and thereby anti-utopian’ (Redfield 2015: 176). As such, Peter Redfield claims, their use does not invoke the Jobsian satisfaction of the beauty of a well-designed product, but ambivalence, or even despair (ibid.).

Our ethnographic material suggests an alternative rendering of the lives of RUTFs in contexts of chronic or enduring practices of state-driven public sector programmes which are shot through with entangled logics of entrepreneurial and philanthropic innovation. In the Indian context, Alice Street has documented the ways in which the nutraceutical industry has shifted from offering health supplements to the middle classes at risk of so-called ‘lifestyle diseases’ to including the marketing of fortified foods to poor and rural communities ‘in a language of humanitarianism’ (2014: 362). South Africa has similarities with this Indian case, but the purpose of this article is to think a little further through the logics of the converging notions of ‘therapeutic food’ and supplement – increasingly taken in the context of the chronic crisis of HIV and packages that promise ‘wellness’. Here, a new question emerges concerning the arrangements of ethical concern, state and market action and citizenship.

In contrast to the humanitarian micro-technologies described elsewhere, RUTF and its design implications in our field sites were firmly within the register of the ordinary. Note, for example, the packaging of Philani Yabantwana porridge: a large picture of an ordinary bowl of maize meal, a South African staple, along with a smaller picture of two smiling children of different races consuming the porridge. These images reference the ordinary, yet the porridge is described on the website as ‘a tasty, fortified maize food supplement aimed at people at risk of developing malnutrition or those with a compromised immune status’. ‘Zymune’, the special additive, is an amylase, phytate and antioxidant mixture meant to lower the product’s viscosity, thereby aiding consumption and digestion as well as its bioavailability. As the online pamphlet concludes, ‘these features do not only provide an affordable option for food supplementation, but ensure the availability of a culturally acceptable oral supplement’. These substances are not prescribed as part of an emergency response, but as part of normalized HIV care and as part of routine antenatal services in the public health sector. Their provision is state-driven, as part of a national nutrition policy, bolstered by public-private and philanthropic partnerships (with organizations such as the Global Alliance for Improved Nutrition) that characterize contemporary global health in these spaces (Geissler 2015). South African corporations who secure state tenders for RUTFs do not operate within the ethical register of ‘nutritional autonomy for all’, but of ‘manufacturing food for wellness’. The everyday provision of RUTF here is not enacted as part of a humanitarian vision for saving lives, but as part of a much broader future-making project, predicated on an ambivalent politics of welfare provision and consumer citizenship.

The design at work, then, in the provision of peanut butter sachets as part of ordinary antenatal care or HIV management, carries a different set of affective valences from the ambivalence of the object of *humanitarian design*. The slick, yellow Design Capital posters found in Cape Town’s clinics reflect an optimism, a vision of inclusion in the city, that sits at odds with the actual positioning of informal settlements in Cape Town’s landscape as marginal and marginalized (see also Gillespie 2014). While activism around sanitation provision in Cape Town’s informal settlements has cast the ‘alternative’ options offered to residents (such as Portaloos) as ‘second-class’ technologies (Redfield & Robins 2016), the use of ‘alternative technologies’ for food supplementation for citizens seems ordinary, unremarkable and beyond the concerns of activists.

While a lack of sanitation is a collective concern, voiced angrily through protest, to be hungry is an ordinary, personal concern. While HIV-positive citizens struggle to take medication without food, and a staggering 25 per cent of children are undernourished in South Africa (Shisana

et al. 2013), there is no language of crisis here. RUTFs circulate here less under the banner of a humanitarian crisis than within a new politics of life that blends an autonomous individual/rights-based discourse with a developmentalist, anticipatory view – what we describe as ‘the temporary as the future’.

The temporary as the future

In the case of the pregnant woman, nutrition policy in South Africa now rests heavily on what is known as the ‘first thousand days’ focus, which posits that nutrition during early life predicts life outcomes and the risk of adult chronic disease based on new knowledge in the fields of the developmental origins of health and disease (DOHaD) and epigenetic science. The imminently born child, whose first thousand days are freighted by the possible long-term effects of early life risk exposures, comes into view of RUTF logics through a mother whose BMI and MUAC metrics signal risk or the potential for a future individual, ambivalently figured as a citizen. RUTF provision to the undernourished pregnant woman as part of state policy thus rests on an anticipatory logic that does not seek to save lives in the immediate sense, but to secure life as capital in the long term. RUTF thus appears alongside antenatal care as a reproductive technology to secure the future, recalling Donna Haraway’s suggestion that agribusiness technologies and computers in financial capitals are as much reproductive technologies as sonograms and *in vitro* fertilization (1997: 208).

The provision of RUTFs to HIV-positive subjects is premised on a notion of immunity. The logic of nutritional supplementation is, again, not based on ensuring immediate survival in the context of a humanitarian crisis or acute infectious outbreak, but on cost-effectiveness, human rights, constitutionalism and the mitigation of risk. It mitigates against progression of HIV infection, hospital admission, decreased economic productivity, and unfulfilled citizenship – no matter how implausible employment in contemporary South Africa might be. As others have noted (Fassin 2012; Natrass 2004, 2012), the tension between cost-effectiveness, constitutionalism and human rights to health have produced a shifting set of political effects impinging on notions of citizenship and life.

Therapeutic foods were initially understood as an important means of bolstering immune system functioning in order to put off the moment of initiation into ART. As CD4 thresholds for ART rise, the logic of RUTF as articulated by/with ART will no doubt shift again. In the coming era of the ‘Treatment as Prevention’ regime (giving antiretrovirals to HIV-negative populations at high risk of infection), the place of therapeutic food in relation to population-wide drugs for prevention is uncertain, but there is every indication that it will remain deeply embedded in public health delivery systems for some time to come as new forms of hunger emerge in the context of structural unemployment and a faltering economic outlook.

Conclusion

Common to the pregnant woman and the HIV-positive subject are both figures of nutritional concern for two reasons: first, an investment in a cost-benefit calculation of the future burden of disease; and second, an affirmation of the (re)productive importance of the mother-child dyad and the economically productive adult to the state’s constitutive logic of authority. While many scholars have pointed out how global health assemblages bypass classic nation state formations of biopolitics, these circulations of RUTF in South Africa suggest a more complex imbrication of state welfare, non-state actors and the existential fact of hunger (cf. Ferguson 2015; Geissler 2015). RUTFs and nutraceuticals in South Africa articulate past, present and future, bringing into sharper focus the ‘durative present’ of hunger and illness for many South Africans.

Instead of the ‘ethics in action’ that characterizes the use of these substances elsewhere (Redfield 2012), ethical action here is interpreted from the point of view of a reflexive future horizon, expressed in ideas of the intergenerational transmission of disease risk and long-term biological outcomes. While an ethical concern structured by the future anterior might imagine the unborn child or the immuno-compromised body to be a moving accumulation of risks and exposures to be mitigated by RUTF, the future into which this present reaches is politically and biologically uncertain. The question that RUTF raises in South African contexts of pregnancy and HIV thus centres on the differential arrangements of ethical concern, temporality and citizenship that are provoked by planning, design and the standardization or globalization of biologies.

Can the South African state afford to respond to structural determinations of hunger and malnourishment in any other way than via the entangled logics of entrepreneurialism and humanitarianism, micro-design and global health and post-social welfare and globalized food networks?

Housing and sanitation activists in Cape Town reveal purportedly temporary solutions as permanent, as designer shacks and portable toilets are dispensed by the state as alternatives to formal housing and sanitation (Redfield & Robins 2016). This article has attempted to illustrate that pharmaceuticalized food supplementation is not only ‘the new permanent’, but has enfolded within it a particular relation to the future. We suggest that the recombinant logics of pharmaceuticalized therapeutic foods needs close ethnographic examination in places like South Africa in order to open up alternative possible readings of ethical concern and political effect in the ordinary and chronic registers in which the mediations of life and death are being worked out. ●

1. Thanks to Darryl Stellmach for this insight.
2. UNICEF initiative that included Growth monitoring of young children, Oral rehydration therapy, promotion of Breast feeding, Immunization, Family planning, Food supplementation and Female education

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Fig. 1. 'Imunut. A ready to use food supplement. 100g = 525kCal. (RUTF F-100 formula.)'

Fig. 2. Women wait for antenatal check-ups. Their body mass indices, measured using the scale pictured, determine whether they are eligible for nutritional supplementation or not, in conjunction with mid-upper arm circumference measurement.

Fig. 3. 'Power Booster. Provides support and maintenance of a healthy digestive system'. Nutraceutical on sale in a KwaZulu-Natal pharmacy.

Fig. 4. 'Power food formula.' If patients do not obtain nutritional supplements via the clinic, they can be purchased at local pharmacies.

Fig. 5. 'A variety of nutritive supplements that claim to boost energy, libido, or improve digestion.'

Fig. 6. Nutritive supplements for pregnancy available in pharmacies in KwaZulu-Natal

Fig. 7. A new mother and her infant wait to be seen for postnatal follow up in the clinic waiting room.

Fig. 8. 'Unity Meal. Instant high protein porridge': nutrition as nation-building in post-apartheid South Africa.

Fig. 9. 'Deo Volente: energising enriched sip feed. 1kcal/ml, 1050kj/250ml. High in energy.' Deo Volente is Latin for 'God-willing': packaged hope for the future?

Fig. 10. 'Philani yabantwana.' Instant fortified porridge with Zymune.